RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION

OIL AND GAS DOCKET NO. 01-0286223

THE APPLICATION OF CES SWD TEXAS, INC PURSUANT TO STATEWIDE RULE 9 FOR THE CES CARRIZO YARD LEASE, WELL NO. 3, EVERGREEN FARMS, NE (1ST OLMOS) FIELD, DIMMIT COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
Laura Miles-Valdez - Legal Examiner

PFD PREPARED BY: Karl Caldwell - Technical Examiner

PROCEDURAL HISTORY

Application Filed:	June 18, 2013
Protest Received:	June 6, 2013
Request for Hearing:	December 4, 2013
Notice of Hearing:	December 18, 2013
Hearing Held:	January 22, 2014
Transcript Received:	February 3, 2014
Proposal for Decision Issued:	June 12, 2014

APPEARANCES:	**REPRESENTING:**
APPLICANT:	CES SWD Texas, Inc.
Ana Maria Marsland-Griffith (Attorney)	
Robert Ayers (Engineer)	
Jason Henderson (Director, CES SWD)	
PROTESTANTS:	Wintergarden Groundwater Conservation District (WGCD)
J.D. Head (Attorney)	
Dr. Ronald Green (Geologist)	
Ed Walker (General Manager, WGCD)	
Hugh Fitzsimmons (Director, WGCD)	

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

CES SWD Texas Inc. ("CES SWD") requests commercial disposal authority pursuant to Statewide Rule 9 for the CES Carrizo Yard Lease, Well No. 3, Evergreen Farms, NE (1st Olmos) Field, Dimmit County, Texas. Notice of the application was published in the *Carrizo Springs Javelin*, a newspaper of general circulation in Dimmit County, Texas on May 29, 2013. Notice of the application was sent to the Dimmit County Clerk, the surface owners of all adjacent tracts to the proposed disposal well location as well as the Wintergarden Groundwater Conservation District (WGCD). The application was protested by WGCD.

DISCUSSION OF THE EVIDENCE

Applicant's Evidence (CES SWD)

The proposed location of the disposal well is the CES Carrizo Yard lease, a 27 acre tract located approximately 1.8 miles southwest of Carrizo Springs, Dimmit County, Texas. The surface owner of the proposed well site tract is Texas CES, Inc., a company affiliated with CES SWD.

CES SWD currently operates two disposal wells on the CES Carrizo Yard lease. Well No. 1 was drilled to a depth of 3,210 feet with a disposal interval from 2,890 feet to 2,970 feet. Well No. 2 was also drilled to a depth of 3,210 feet with a disposal interval from 2,916 feet to 2,996 feet. Both Well No. 1 and Well No. 2 are permitted to dispose into defined intervals within the Olmos formation. CES SWD proposes to drill a new well (Well No. 3) into the Glen Rose formation from 8,575 feet to 10,850 feet on the CES Carrizo Yard lease for commercial disposal. The proposed well construction of the disposal well is as follows (Attachment 1):

- The well will be drilled to a TD of 10,850 feet.
- 9 5/8" surface casing will be set at 1,150 feet and cementing in place with 420 sacks of cement, circulated back to surface.
- 7" long string of casing will be set to a depth of 8,575 feet and a multi-stage tool will be set at 5,000 feet. The casing will be cemented with 700 sacks and the top of cement behind the long string will be approximately 1,100 feet from surface.
- An 8 3/4" open hole section will be drilled from 8,575 feet to 10,850 feet.
- CES has requested 8,575 feet to 10,850 feet in the open hole section as the permitted disposal interval.

- 4 1/2 " tubing will be run inside the 7" casing and a packer set on the end of the tubing at 8,500 feet.

- The maximum daily injection volume will be 25,000 barrels per day (bpd).

- The maximum surface injection pressure will be 3,500 psi.

CES SWD requests authority for the disposal of commercial salt water and RCRA[1] exempt wastes. The source of the water and RCRA exempt waste will be generated from the flow back of both frac water and produced water from Eagle Ford activity in the area.

The Commission's Groundwater Advisory Unit (GAU) identifies the base of usable-quality water (BUQW) occurring at a depth of 900 feet from the land surface. The water from the land surface to a depth of 400 feet is of superior quality water and must be isolated from water in underlying beds. The proposed surface casing program will set 9 5/8 inch surface casing at 1,150 feet and circulate cement to surface to isolate and protect the BUQW.

The only active wells located within a half mile radius of the proposed disposal well location are the CES SWD Well Nos. 1 and 2. CES SWD discovered drilling permits were issued for two other wells within a half mile radius from the proposed disposal well location, but Commission records show the permits have expired and no completion or plugging data was found in the records. CES SWD concluded that no completions within a one-quarter or one-half mile radius of the proposed disposal well have penetrated the proposed injection interval in the Glen Rose formation. There are no producing wells within a half mile radius of the proposed disposal well location. Within a two mile radius, there are productive zones, namely the Olmos sands which occur at a depth of 2,500 to 3,500 feet in this area.

CES SWD has identified the Glen Rose formation as a suitable disposal interval since there is a disposal well (Pecan Tree SWD, API No. 42-127-33896) located 10 miles north of CES SWD's proposed disposal well location injecting into the Glen Rose. The maximum permitted volume of the Pecan Tree SWD is 20,000 bpd. In CES SWD's opinion, the Pecan Tree SWD is able to dispose of its maximum daily permitted volume.

CES SWD provided the Latham McKnight Well No. 2 (unknown API No.) as the offset well log with the application. The Latham McKnight Well No. 2 was drilled approximately 10.5 miles west-southwest of the proposed disposal well location. CES SWD selected the Latham McKnight Well No. 2 as the offset well log since the well was logged through the Glen Rose formation. Robert Ayers, an engineer representing CES SWD identifies the top of the Glen Rose formation (base of the Edwards formation) at 8,575 feet and the base of the Glen Rose formation (top of the Pearsall formation) at 10,825 feet on the offset log. Mr. Ayers describes the Edwards formation in this particular

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[1] Resource Conservation and Recovery Act: Examples of RCRA exempt oil and gas waste includes produced water, drilling fluids, frac flowback fluids, rigwash and workover wastes.

log as tight and non-porous, confining disposal fluids injected below 8,575 feet. Mr. Ayers states that impervious shale boundaries are located stratigraphically higher uphole, such as the Eagle Ford shale, that will isolate the Carrizo-Wilcox and other water-bearing sands. Directly below 10,850 feet on offset log is the top of the Pearsall formation. Mr. Ayers characterizes the Pearsall formation as the basement rock and a tight, confining layer.

Jason Henderson, CES SWD Director, states that the Glen Rose formation at the proposed disposal well location is non-productive and does not contain usable-quality water. The nearest well with oil production from the Glen Rose formation is located 43 miles north of the proposed disposal well location. CES SWD investigated the depth of usable quality groundwater listed for several wells drilled in the Dimmit County area to assess the depth variability since 1978. In examining six wells where the depth of the BUQW was identified, the depths range from 625 feet to 800 feet from surface. CES SWD concludes that the depths of BUQW identified by GAU since 1978 in nearby wells are comparable to the depth of 900 feet identified at the proposed well location.

Mr. Henderson referenced a report by the Texas Water Development Board that concluded the Balcones Fault Zone (BFZ) that runs from Bell County to Kinney County separates usable quality water in the Edwards formation north of the BFZ and saline water south of the BFZ. Dimmit County is located south of the BFZ and therefore the Edwards formation water is saline in this county. In Mr. Henderson's opinion, the water quality of the Glen Rose formation will be similar to the water quality of the Edwards formation.

Mr. Henderson considers Edwards formation water analysis from Karnes County to be correlative for Dimmit County. The reasoning is that both Karnes and Dimmit counties are located south and down-dip of the BFZ, and listed depths of the Edwards formation are similar for both counties. In Mr. Henderson's opinion, the TDS of the Glen Rose formation water is approximately 200,000 parts per million (ppm) at the proposed disposal well location, based on Edwards formation water quality analysis from Karnes County.

The proposed disposal well location is not within any city limits and the surrounding area is described as an industrial-type setting. CES SWD has an existing facility at the proposed disposal well location that provides oilfield services to Dimmit County and the surrounding Eagle Ford shale play area. CES SWD currently operates the CES Carrizo Yard Well Nos. 1 and 2 commercial disposal wells and approximately 30 trucks at the location. The CES SWD surface facility was designed to handle disposal capacity of 20,000 bpd and will not need to be modified if the new disposal well application is approved.

CES SWD expresses a need for a new disposal well as the CES Carrizo Yard Well Nos. 1 and 2 commercial disposal wells have a limited functional disposal capacity. These two wells are permitted to dispose of 10,000 bpd per well into the Olmos formation which is located approximately 5,300 feet above the Glen Rose formation. The Olmos interval is a tight sand with a limited daily injection capacity. CES SWD can dispose of approximately 6 full truck loads per day (600 bpd) per well into the Olmos interval before reaching the maximum permitted injection pressure of each well.

During a three week period in December 2013, CES SWD made 380 truck trips to pick up brine water from customers in the nearby area. Only 16% of this brine water was disposed of at the two current CES SWD disposal wells due to a lack of functional capacity. The remaining 84% of the water was transported to third-party facilities for disposal. These third-party facilities were located further away, resulting in increased disposal times and higher disposal costs.

In CES SWD's opinion, there is a need for additional disposal capacity in this area. Approximately 550 drilling permits were issued for Dimmit County in 2013. Dimmit County is an area where rig counts have been increasing, with 20 rigs currently operating in the county. CES SWD has an established customer base in the area with Anadarko and Chesapeake identified as two of the major customers. Chesapeake has approached CES SWD inquiring whether there is additional disposal capacity on the CES Carrizo Yard Lease.

CES SWD has a current approved P-5 (Organization Report). A $50,000 letter of credit is on file with the Commission as financial assurance.

Protestants' Evidence (Wintergarden Groundwater Conservation District)

The application is protested by WGCD. The primary concern of WGCD is the request for disposal into the Glen Rose formation. WGCD questions the validity of using a log from a well located 10.5 miles west-southwest from the proposed disposal well location as the only reference point used to select the disposal interval. The offset well log shows the top of the Glen Rose formation at 8,575 feet and the base at 10,850 feet. WGCD states that CES SWD should not assume that these same depths would be the top and bottom of the Glen Rose formation at the proposed disposal well location.

WGCD is concerned with disposal into the Glen Rose formation since no water sample data exists to identify the quality of water in this formation in Dimmit County. According to WGCD, Glen Rose wells may contain either usable water or water that could be de-salinated and used at some point in the future. Ed Walker, WGCD General Manager, states that a well located approximately 9 miles northeast of proposed disposal well location extracts water from the Glen Rose formation. Mr. Walker testifies that two other wells, one located approximately 15 to 18 miles southwest of the proposed disposal well location and another located approximately 20 to 25 miles south-southwest of the proposed disposal well location also use water from the Glen Rose formation. No water quality analysis of the referenced wells was presented.

Ronald Green, a scientist representing WGCD, is concerned that the quality of the water in the interval that CES SWD is requesting as a disposal interval is unknown. Water levels in the Carrizo aquifer have been depressed by as much as 300 to 400 feet in areas of WGCD's jurisdiction as compared to pre-development levels and recharge to the aquifer is less than the amount of water extracted. This has led to increased interest in alternative water sources and investigations for usable quality groundwater at greater depths.

Mr. Green provided a map detailing the depths of Carrizo-Wilcox aquifers in Dimmit County along with fault locations superimposed on the map using data from the Bureau of Economic Geology and Hamlin (1988)[2]. On the map the depth of usable quality water varies from less than 200 feet to a maximum of 9,012 feet. Mr. Green states that there is a lot of faulting in Dimmit County. In Mr. Green's opinion, the faulting is variable, but the offset can be as great as 350 feet. There is data showing usable quality water at the depth of the proposed disposal interval in Dimmit County. However, due to localized faulting, Mr. Green could not say whether usable quality water identified at a depth of 8,667 feet located 5 miles east of Carrizo Springs would be within the proposed disposal interval of 8,575 to 10,850 feet at the proposed disposal well location.

WGCD cross-examined CES SWD on the status of a well (API No. 42-127-33475) located within a one-half mile radius of the proposed disposal well location. This well has been issued a drilling permit with a listed completion depth of 8,950 feet. CES SWD states that there is no completion or plugging record for API No. 42-127-33475, and to the best of their knowledge, the well has not been drilled. WGCD is concerned that if the well has been drilled, has penetrated the Glen Rose formation and is not properly plugged, there would be an open conduit in close proximity to the proposed disposal well.

WGCD questioned CES SWD on the number of disposal wells located within a 15 mile radius of the proposed disposal well location. CES SWD estimates that four disposal wells are located within a 15 mile radius of the proposed disposal well location, two of which are CES SWD disposal wells. CES SWD does not know the cumulative permitted capacity of the four disposal wells within the 15 mile radius.

EXAMINERS' OPINION

The examiners recommend that the application for commercial disposal authority pursuant to Statewide Rule 9 for the CES SWD Texas Inc. CES Carrizo Yard Lease, Well No. 3, Evergreen Farms, NE (1st Olmos) Field, Dimmit County, Texas be denied.

Texas Water Code Section 27.051 (b) provides guidelines with respect to permitting disposal and injection wells as follows:

> 27.051 (b) The Railroad Commission may grant an application for a permit under Chapter 27 of the Texas Water Code, Subchapter C in whole or part and may issue a permit if it finds:

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[2] Hamlin, H.S. 1988. Depositional and Ground-Water Flow Systems of the Carrizo-Upper Wilcox, South Texas: Report of Investigations No. 175. Austin, Texas: University of Texas at Austin, Bureau of Economic Geology. P. 61.

(1) that the use or installation of the injection well is in the public interest;

(2) that the use or installation of the injection well will not endanger or injure any oil, gas, or other mineral formation;

(3) that, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution;

(4) that the applicant has made a satisfactory showing of financial responsibility if required by Section 27.073 of this code.

Furthermore, a permit for saltwater or other oil and gas waste disposal requires the injected fluids be confined to the permitted disposal zone in accordance with Statewide Rule 9.

CES SWD has not established:

- The injected fluids will not escape the permitted disposal zone;
- The water resources (surface and sub-surface) are adequately protected from pollution;
- The use or installation of the injection well will not endanger or injure any oil, gas, or other mineral formation.

CES SWD has established:

- The proposed injection well is in the public interest insofar as there is a need for additional disposal capacity in this area;
- A satisfactory showing of financial responsibility.

It is the examiners' opinion that the application be denied because CES SWD has not adequately demonstrated that injected fluids would not escape from the permitted disposal zone. Since CES SWD has not demonstrated that injected fluids would be confined within the permitted interval in the proposed disposal well, there is insufficient evidence to determine whether the use or installation of the injection well will not endanger or injure any oil, gas, or other mineral formation, or that the disposal formation is separated from freshwater formations by impervious beds which will give adequate protection to such freshwater formations.

CES SWD is requesting a disposal interval from 8,575 feet to 10,850 feet at the proposed disposal well location. The offset well log provided by CES SWD shows that the bottom of the Edwards formation occurs at 8,575 feet, which is tight and non-porous and would confine disposal fluids injected below 8,575 feet. Directly below 10,850 feet in the offset well log is the top of the Pearsall formation which is a tight, confining layer. However, the offset well log where the upper and lower depths of the confining layers were identified is located 10.5 miles in a west-southwest direction from the proposed disposal well location (Attachment 2). In the examiners' opinion, an offset log 10.5 miles away from the proposed disposal well location is too great a distance to be considered a nearby well for the purpose of identifying suitable disposal and confining intervals.

During the hearing, CES SWD stated that the Edwards and Glen Rose formations dip downward when traversing in a southeast direction from a reference point in northern Dimmit County as shown in CES SWD Exhibit No. 9 (Attachment 3). Based on the scale provided in CES SWD Exhibit No. 9, both the Edwards and Glen Rose formations are located approximately 800 feet higher at a point in northern Dimmit County as compared to a point approximately 24 miles southeast in Dimmit County. This information increases the probability that the Edwards, Glen Rose, and Pearsall formations are located at shallower depths at the proposed disposal well location as compared to the depths identified on the offset well log since the proposed disposal well location is 10.5 miles east-northeast and up-dip from the offset well. In the examiners' opinion, the depth, thickness, and properties of the intervals identified by CES SWD as the disposal and confining intervals are unknown at the proposed disposal well location.

CES SWD did not sufficiently demonstrate that the upper confining boundary identified on the offset well log is present at the proposed disposal well location 10.5 miles to the east-northeast due to the absence of additional logs either closer to the proposed disposal well location or well logs east of the proposed location to construct a cross-section of the area. If this upper confining interval does exist at the proposed disposal well location, the interval most likely occurs at a depth shallower than 8,575 feet. As a result, the injected fluids will not be confined to the permitted disposal interval of 8,575 to 10,850 feet. Upward vertical migration within the formation may occur until the correlative tight, non-porous base of the Edwards formation is encountered by the injected fluids. If the lower portion of the Edwards formation is more porous at the proposed disposal well location, the injected fluids may continue to migrate upward until an impervious boundary is encountered. Again, in the examiners' opinion, the information provided by CES SWD does not demonstrate that the interval from 8,575 feet to 10,850 feet at the proposed disposal well location is suitable for disposal.

A new disposal well application requires the applicant to submit a complete electrical log of the subject well or the log of a nearby well. In the examiners opinion, the log submitted by CES SWD is located at a distance from proposed disposal well location greater than what is considered a nearby well log. The Applicant has not identified a precedent case where the Commission has previously approved a disposal well application based upon a single offset well log at this great a distance from the proposed disposal well location.

Separate and apart from the uncertainty associated with the stratigraphic and structural issues as previously described, the proposed well construction of the disposal well would protect the BUQW. The GAU identifies the BUQW as occurring at a depth of 900 feet from the surface. The water from the land surface to a depth of 400 feet is of superior quality water and must be isolated from water in underlying beds. The proposed surface casing program would set 9 5/8 inch surface casing at 1,150 feet and circulate cement to surface to isolate and protect the usable-quality groundwater.

There is no data available that identifies the quality of water in the Glen Rose formation in Dimmit County. WGCD states that there are wells using water from the Glen Rose formation in Dimmit County. CES SWD cross-examined WGCD on the water quality of these Glen Rose wells. WGCD does not know the water quality, only that there are examples of wells using water from the Glen Rose formation in Dimmit County.

WGCD provided a map detailing the depths of Carrizo-Wilcox aquifers in Dimmit County along with fault locations. Aquifers with usable-quality water at depths of 9,012 feet were identified in Dimmit County. However, there is a localized fault located east of Carrizo Springs and no usable-quality water deeper than 5,100 feet is identified west of this fault. The proposed disposal well location is west of this fault.

CES SWD presented historical data of Edwards formation water in nearby counties and expects the Glen Rose formation water to be similar to the Edwards formation water in nearby counties. CES SWD and WGCD have differing opinions on the Glen Rose formation water quality in Dimmit County. In the absence of actual measured water quality information to the contrary, the GAU's determination of the BUQW depth of 900 feet at the proposed disposal well location is appropriate.

WGCD is concerned with a drilling permit that has been issued with a listed completion depth of 8,950 feet within a half mile radius of the proposed disposal well location. The examiners researched the well after the hearing and determined that the Commission had received hard copies of a gyro survey from 0 feet to 6,400 feet MD, as well as a MWD survey from 5,932 feet to 6,802 feet. The operator did not file a completion report for the well. This information was forwarded to the Commission's District Office to determine whether the well has been properly plugged. The well does not penetrate the proposed disposal interval.

The "public interest" finding required by Texas Water Code 27.051(b) is limited to matters related to oil and gas production, and does not include issues such as traffic safety and road conditions. CES SWD demonstrated that the proposed disposal well is in the public interest insofar as additional disposal capacity is needed. CES SWD estimates there are four disposal wells within a 15 mile radius of the proposed disposal well location. CES SWD does not know the cumulative permitted capacity of the four wells, however, two of these wells are operated by CES SWD. The two existing CES SWD wells are permitted to dispose of a maximum of 10,000 bpd per well. CES SWD has a need for additional disposal capacity due to a limited operational capacity of its two existing disposal wells in the area. The two existing wells are able to dispose of 600 bpd per well, or 6% of its maximum daily permitted capacity.

CES SWD has an established operation with experience operating commercial disposal wells on the Carrizo Yard Lease. The existing facility does not require modifications to accommodate additional disposal capacity.

The examiners conclude that CES SWD has made a satisfactory showing of financial responsibility as required by Section 27.073 of the Texas Water Code. CES SWD has a current approved P-5 (Organization Report). A $50,000 letter of credit is on file with the Commission for CES SWD as financial assurance

FINDINGS OF FACT

1. Notice of the application was published in the *Carrizo Springs Javelin*, a newspaper of general circulation in Dimmit County, Texas on May 29, 2013.

2. Notice of the application was sent to the Dimmit County Clerk, as well as the surface owners of all adjacent tracts to the proposed disposal well location and to the Wintergarden Groundwater Conservation District (WGCD).

3. The proposed well construction of the CES Carrizo Yard Lease Well No. 3 would not endanger useable quality water.

    a. The Commission Groundwater Advisory Unit recommends that usable-quality groundwater be protected down to a depth of 900 feet below the land surface.

    b. The well would have 9 5/8" surface casing set at 1,150 feet in a 12 1/4" hole that would be cemented to surface with 420 sacks of cement. This is 250 feet below the usable-quality water depth of 900 feet.

    c. The proposed disposal interval would be 8,575 feet to 10,850 feet.

4. CES SWD did not show that the injection of fluids into an interval from 8,575 feet to 10,850 feet at the proposed disposal well location:

    a. would not escape the permitted zone;

    b. would not endanger or injure any oil, gas, or other mineral formation;

    c. would be separated from freshwater formations by impervious beds.

        i. The interval from 8,575 feet to 10,850 feet was identified as the top and bottom of the Glen Rose formation 10.5 miles west-southwest from the proposed disposal well location.

ii. No additional logs were used to correlate the top and bottom of the Glen Rose formation at the proposed disposal well location.

iii. The Edwards formation overlying the Glen Rose formation in the reference log 10.5 miles away from the proposed disposal well location was described as tight, non-porous, and a confining boundary.

iv. The proposed disposal well is located east-northeast of the offset well log.

v. Formations occur at shallower depths in northern Dimmit County as compared to southern Dimmit County.

vi. The proposed disposal well location is updip from the offset well log used to select the disposal interval.

vii. Insufficient evidence was provided to conclude that the rock properties of the disposal and confining intervals identified in the offset log are comparable at the proposed disposal well location.

5. CES SWD has demonstrated the proposed commercial disposal well would be in the public interest as it pertains to oil and gas production.

a. CES SWD currently operate the CES Carrizo Yard Well Nos. 1 and 2 disposal wells at the proposed location for Well No. 3.

b. The current facility would not require modifications to the surface facilities to accommodate additional disposal capacity;

c. CES SWD currently operate approximately 30 trucks from the facility;

d. The current wells on the CES Carrizo Yard Lease are permitted for disposal in the Olmos formation;

e. At the CES Carrizo Yard location, functional disposal capacity into the Olmos formation is approximately 600 bbl (6 full truck loads) per day, which is 6% of the permitted capacity;

f. During a three week period in late 2013, CES SWD could dispose of only 16% of the total water picked up due to a lack of functional disposal capacity in Olmos formation;

g. 550 drilling permits were issued for Dimmit County in 2013 and rigs counts are increasing in the area.

6. CES SWD has established that the company is in good financial standing should the application be approved and the permit granted. CES SWD has a current approved P-5 (Organization Report). A $50,000 letter of credit is on file with the Commission as financial assurance

CONCLUSIONS OF LAW

1. Proper notice was issued in accordance with the applicable statutory and regulatory requirements.

2. All things necessary to give the Railroad Commission jurisdiction to consider this matter have occurred.

3. CES SWD Texas Inc. has not met its burden in demonstrating that its application satisfies the requirements of Chapter 27 of the Texas Water Code and the Railroad Commission's Statewide Rule 9.

EXAMINERS' RECOMMENDATION

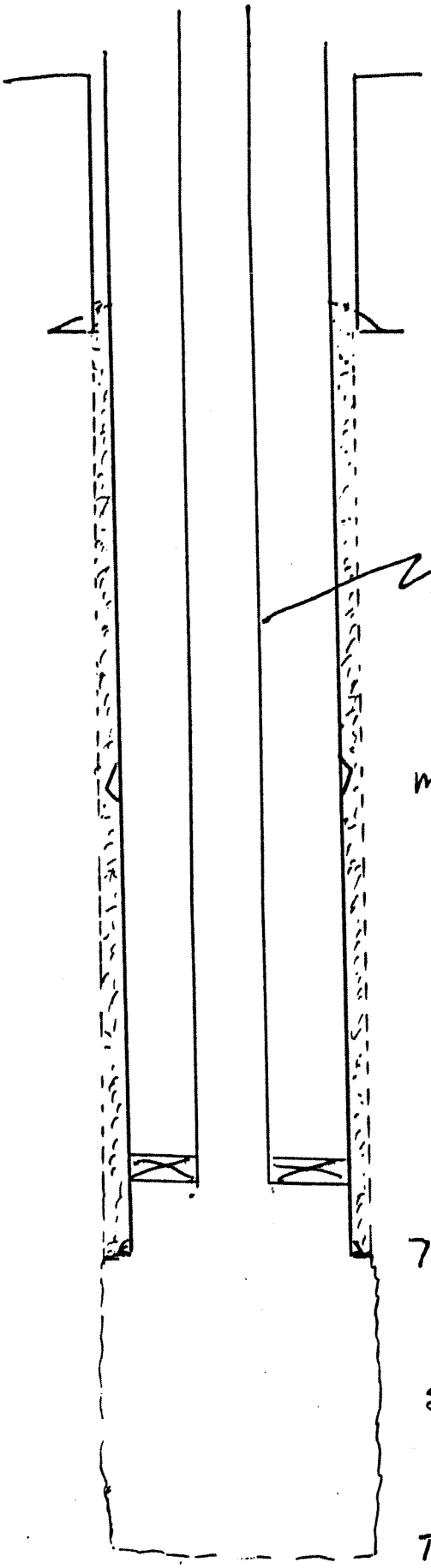
Based on the above findings of fact and conclusions of law, the examiners recommend that the application of CES SWD Texas Inc. for commercial disposal authority pursuant to Statewide Rule 9 for the CES Carrizo Yard Lease, Well No. 3, Evergreen Farms, NE (1st Olmos) Field, Dimmit County, Texas, be denied, as set out in the attached Final Order.

Respectfully submitted,

Karl Caldwell
Technical Examiner

Laura Miles-Valdez
Legal Examiner

CES SWD Texas, Inc
Corrizo Yard #3
Dimmitt County, Texas

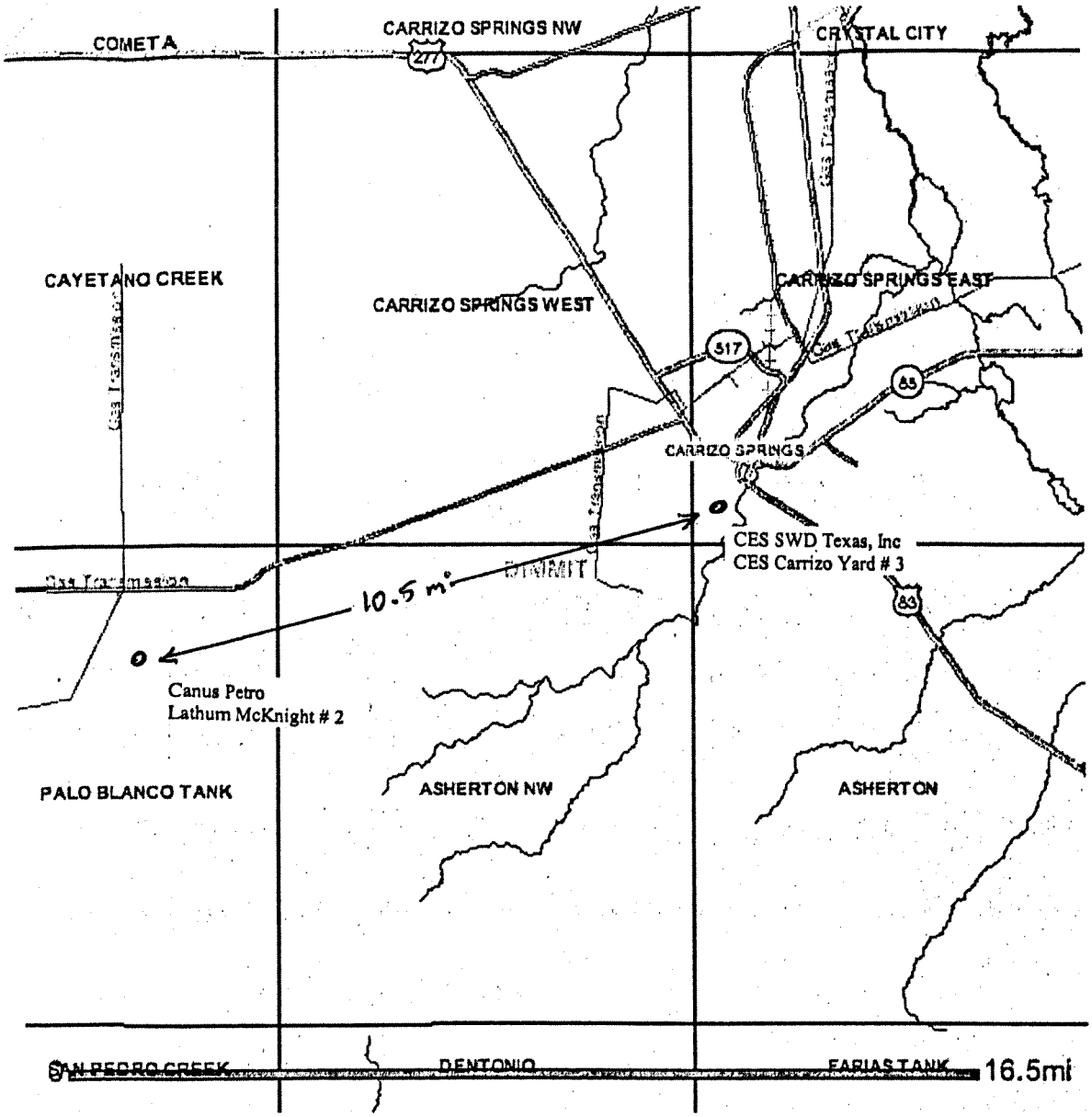


Oil & Gas Docket No. 01-0286223

CES SWD TEXAS, INC.

January 22, 2014 Exhibit No. 5

Attachment 1

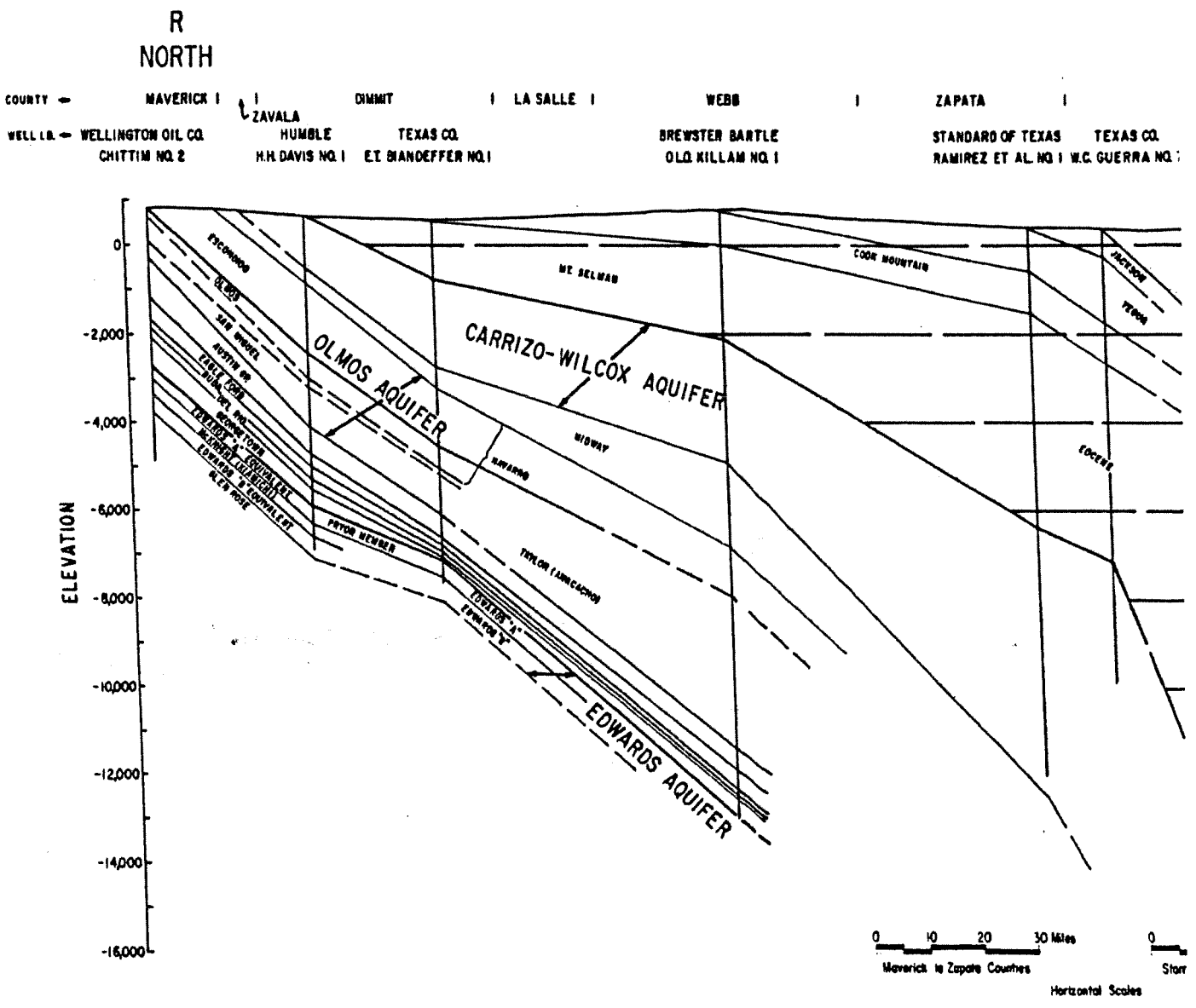


Attachment to W-14
Location of Type Log

CES SWD Texas, Inc
CES Carrizo Yard # 3
Dimmit County, Texas

Scale shown on plat

North



Attachment 3